

REMARKS

Claims 1, 3-5, 8-11, 13-15 and 18-21 are pending in this application and these claims stand rejected.

Claims Rejections under 35 USC §103

Claims 1, 4, 5-7, 11, 14-17 and 21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2500761 in view of JP 60-16200 and further in view of Ichikawa et al. (U.S. 4,985,923).

The rejection of independent claims 1, 11 and 21 provided on pages 1-3, item 2 of the Office Action is similar to that provided in the Office Action mailed June 5, 2006 with the exception that the Examiner admits that the prior art fails to disclose the specific equations incorporated in the independent claims. However, the Examiner asserts on page 3 of the Office Action, first paragraph, that this is well known. Applicants disagree with the Examiner and will discuss this further ahead.

The present invention is a speech recognition device. There are a total of four embodiments described in the specification for this speech recognition device. In this speech recognition device is included as shown in Figure 1 a microphone connected to an A/D converter (2). The A/D converter (2) is connected to both a signal delay unit (3) and a sound level estimator (4). The sound level estimator (4) calculates a sound level estimation value based on the applied digital sound signal. The signal delay unit (3) applies the digital sound signal delayed by a predetermined sound

level rising time period to a sound level adjuster (5). The sound level adjuster (5) adjusts the sound level of the digital sound signal based on the sound level estimation value. The adjusted sound level output is sent to the speech recognition unit (6) where speech recognition is performed.

JP 2500761 describes a speech recognition device in which amplification is set to a constant level so that gain of the amplification means is rendered large for small voices and rendered small for large voices. As described in paragraphs 7 and 17 the result of voice recognition does not vary with distance or volume of the voice and voice recognition is greatly improved.

JP 60-16200 describes a voice recognition system in which a delay circuit (13) delays a voice input signal.

Ichikawa et al. (US Patent No. 4,985,923) describes using two sections of a buffer (203) to hold speech data uninterruptedly while the other section is processed. Specifically, column 4, lines 4-9 of Ichikawa et al. states,

“In FIG. 2, an input speech signal 201 is transformed into a digital signal by an A/D converter 202, and it is fed to an input buffer 203. The buffer 203 has two data holding sections so that during the encoding process for speech data with a certain length the next speech data can be held uninterruptedly.” (Emphasis Added)

As previously discussed, independent claims 1, 11 and 21 were amended to overcome the prior art by adding the three equations which indicate the method by which sound level is adjusted as discussed on page 22 and 23 of the specification. This significantly narrows the scope of the independent claims. However, the Examiner admits that the prior art fails to teach the newly added claim limitations, but asserts that this is “well known” requiring only routine skill in the art.

Applicants traverse the Examiner's assertions and require that **she produce a reference teaching these limitations as required under MPEP §2144.03.** Applicants do not wish to make any further amendments to the independent claims since Applicants believe that they already patentably distinguish over the prior art of record and, therefore, traverse the Examiner's grounds of rejection. The applicant does not believe that the Examiner can produce such a reference and request that Examiner allow all the claims.

Therefore, withdrawal of the rejection of claims 1, 4, 5-7, 11, 14-17 and 21 under 35 U.S.C. 103(a) as being unpatentable over JP 2500761 in view of JP 60-16200 and further in view of Ichikawa et al. (U.S. 4,985,923) is respectfully requested.

Claims 3, 10, 13 and 20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2500761 in view of JP 60-16200 and Ichikawa, and further in view of JP 126093 (Okamoto).

JP 126093 (Okamoto) describes a voice adjusting method in which a level decision part (42) decides whether the measured sound level resides within a prescribed range and outputs an input gain control signal to control the input voice so that it lies within the prescribed range.

Claims 1, 11 and 21 are allowable by virtue of their dependence from allowable independent claims. Therefore, withdrawal of the rejection of claims 3, 10, 13 and 20 under 35 U.S.C. 103(a) as being unpatentable over JP 2500761 in view of JP 60-16200 and Ichikawa, and further in view of JP 126093 (Okamoto) is respectfully requested.

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Reply to Final OA dated October 19, 2006

Claims 8-9 and 18-19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2500761 in view of JP60-16200 and Ichikawa, and further in view of JP2975808 (Koichi).

JP2975808 (Koichi) describes a voice recognition device in which when voice recognition fails circuit (2C) is switched to increase the gain on the variable gain amplifier (2B).

Claims 1, 11 and 21 are allowable by virtue of their dependence from allowable independent claims. Therefore, withdrawal of the rejection of claims 8-9 and 18-19 under 35 U.S.C. 103(a) as being unpatentable over JP 2500761 in view of JP60-16200 and Ichikawa, and further in view of JP2975808 (Koichi) is respectfully requested.

Conclusion

In view of the aforementioned remarks, claims 1, 3-5, 8-11, 13-15 and 18-21 are believed to be patentable and in condition for allowance, which action, at an early date, is respectfully requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

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In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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